

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	M.L. Bayne et al.
Serial No.:	To be assigned Case No. 18199CB
Filed:	Submitted on even date herewith
For:	DNA MOLECULES ENCODING VASCULAR ENDOTHELIAL CELL GROWTH FACTOR II SUBUNITS (As Amended Herein)

1646

Examiner:
L. Spector

Assistant Commissioner of Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT, 37 C.F.R. §1.111, 1.115

Sir:

Preliminary to the examination of this Rule 53(b) continuation application, please calculate the filing fee due based on entry of new claims 22-37. Please enter the additional amendments and consider the following remarks. This application is co-pending to U.S. Application Serial No. 09/326,879, filed June 7, 1999. A Notice of Appeal was filed in the '879 application on September 10, 2001. A Petition to Extend Time under 37 C.F.R. §1.136(a) for three (3) months is entered on an even date herewith to continue pendency of the '879 application up to and including Monday, February 11, 2002. Applicants intend to cease further prosecution of the '879 case in favor of this above-identified continuation application.

EXPRESS MAIL CERTIFICATE

DATE OF DEPOSIT February 8, 2002

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DATE 2-8-02

At page 1, line 2, please delete the title "VASCULAR ENDOTHELIAL CELL GROWTH FACTOR II" and insert a new title --DNA MOLECULES ENCODING VASCULAR ENDOTHELIAL CELL GROWTH FACTOR II SUBUNITS--.

-- This application is a continuation application of application no. 09/326,879, filed June 7, 1999, which is a divisional of application no. 09/038,199, filed March 10, 1998, issued as U.S. Patent No. 6,180,107, which is a divisional of application no. 08/299,185, filed August 31, 1994, issued as U.S. Patent No. 5,726,152, which is a continuation-in-part of application no. 08/000,834, filed January 5, 1993, abandoned, which is a continuation of application no. 07/586,638, filed September 21, 1990, abandoned. --.

At page 2, line 26, following “Figure 6”, please insert --and Figures 6A through 6B--.

At page 10, line 22, please delete “Figure 4” and insert --Figures 4 through 4M--.

At page 11, line 11, please delete “Fig. 4 and Fig. 5” and insert --Figures 4

At page 11, line 27, please delete “Figure 4” and insert --Figures 4 through 4M--.

At page 11, line 33, please delete “Fig. 5 and Fig. 6” and insert --Figures 5 through 5C and Figures 6 through 6B--.

At page 12, line 5, please delete “Figs. 4 and 5” and insert --Figures 4 through 4M and Figures 5 through 5C--.

At page 13, line 3, please delete “Fig. 6 and Fig. 7” and insert --Figures 6 through 6B and Figures 7 through 7A--.

At page 23, line 15, please delete “Figs. 5 and 6” and insert -- --Figures 5 through 5C and Figures 6 through 6B--.

At page 23, line 16, please delete “Fig. 5” and insert --Figures 5 through 5C--.

At page 23, line 17, please delete "Fig. 6" and insert --Figures 6 through 6B--.

At page 29, line 13, please delete "Fig. 5" and insert --Figures 5 through 5C--.

At page 37, line 25 please delete "Figures 6 and 7" and insert --Figures 6 through 6B and Figures 7 through 7A--.

At page 39, line 31, please delete "Fig. 6 and Fig. 7" and insert --Figures 6 through 6B and Figures 7 through 7A--.

At page 39, line 33, please delete "Fig. 7" and insert --Figures 7 through 7A--.

At page 40, line 1, please delete "Fig. 7" and insert --Figures 7 through 7A--.

At page 42, line 20, please delete "Fig. 6" and insert --Figures 6 through 6B--.

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IN THE CLAIMS:

Please cancel claims 1-21, without prejudice.

Please enter new claims 22-37, as follows:

22(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 158 amino acid precursor protein as shown in Figure 6.

23(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 22.

24(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 23.

25(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfecting the expression vector of claim 23 into a suitable host cell;
and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

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26(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 135 amino acid mature protein as shown in Figure 6.

27(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 26.

28(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 27.

29(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfecting the expression vector of claim 27 into a suitable host cell;
and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

30(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 138 amino acid precursor protein as shown in Figure 7.

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31(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 30.

32(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 31.

33(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfecting the expression vector of claim 31 into a suitable host cell;
and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

34(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 115 amino acid mature protein as shown in Figure 7.

35(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 34.

36(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 35.

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37(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfecting the expression vector of claim 35 into a suitable host cell;
and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

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REMARKS

Original claims 1-21 are cancelled , without prejudice.

New claims 22-37 are respectfully entered. New claims 22-37 correspond to allowed subject matter from U.S. Application Serial No. 09/326,879, as follows:

	<u>879 Application</u>	<u>New Claims</u>
Claim #	26	22
	27	23
	28	24
	29	25
	30	26
	31	27
	32	28
	33	29
	34	30
	35	31
	36	32
	37	33
	38	34
	39	35
	40	36
	41	37

The specification was amended in anticipation of utilizing the same formal drawings as used in U.S. Patent No. 5,726,152, as well as updating the continuing data. Applicants respectfully note that reference should be made to appl. no. 07/586,638, not 07/586,631.

New claims 22-37 mirror allowed claims from the '879 application as noted above. Applicants reserve the right to pursue non-elected and/or non-recited subject matter in a future continuing application. No new matter is added by entry of new claims 22-37. Applicants respectfully take the position that the pending claims remain allowable. If necessary, the Examiner is invited to contact the undersigned attorney by telephone if clarification is required on any aspect of this response.

Respectfully submitted,

By J. Mark Hand
J. Mark Hand
Reg. No. 36,545
Attorney for Applicants
Merck & Co., Inc.
P.O. Box 2000
Rahway, NJ 07065-0907
(732) 594-3905

Date: FEBRUARY 8, 2002

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PATENT

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Applicants: M. Bayne et al.

Serial No.: 09/326,879 – Case 18199CB

Filed: Concurrently herewith (Express Mail EL523909946US)

For: VASCULAR ENDOTHELIAL CELL GROWTH
FACTOR II

Art Unit:

1647

Examiner:

L. Spector

Assistant Commissioner of Patents
Washington, D.C. 20231

ATTENTION: Official Draftsman

TRANSMITTAL OF FORMAL DRAWINGS

Sir:

Submitted herewith are new drawings to correct the informalities in the originally submitted drawings. Enclosed please find thirty two (32) sheets of formal drawings (Figs 1-11).

Should communication with the undersigned representative facilitate the review and the acceptance of the enclosed drawings, the Official Draftsman is invited to telephone the representative at the number listed below.

Respectfully submitted,

By

J. Mark Hand
J. Mark Hand

Reg. No. 36,545

Attorney for Applicant

MERCK & CO., INC.

P.O. Box 2000

Rahway, New Jersey 07065-0907

(732) 594-3905

(732) 594-4720 - fax

EXPRESS MAIL CERTIFICATE

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DATE 2-8-02

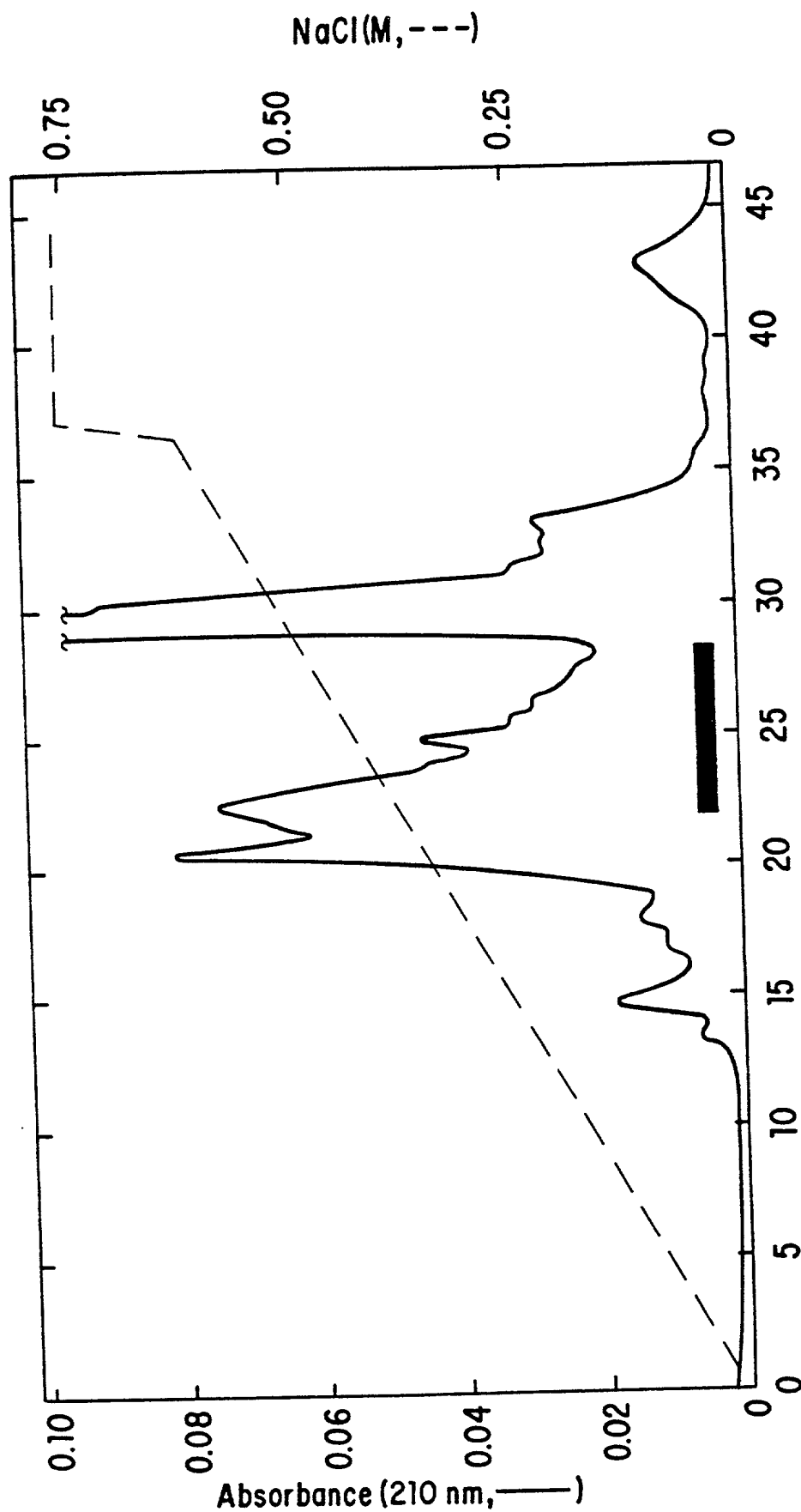


FIG. 1

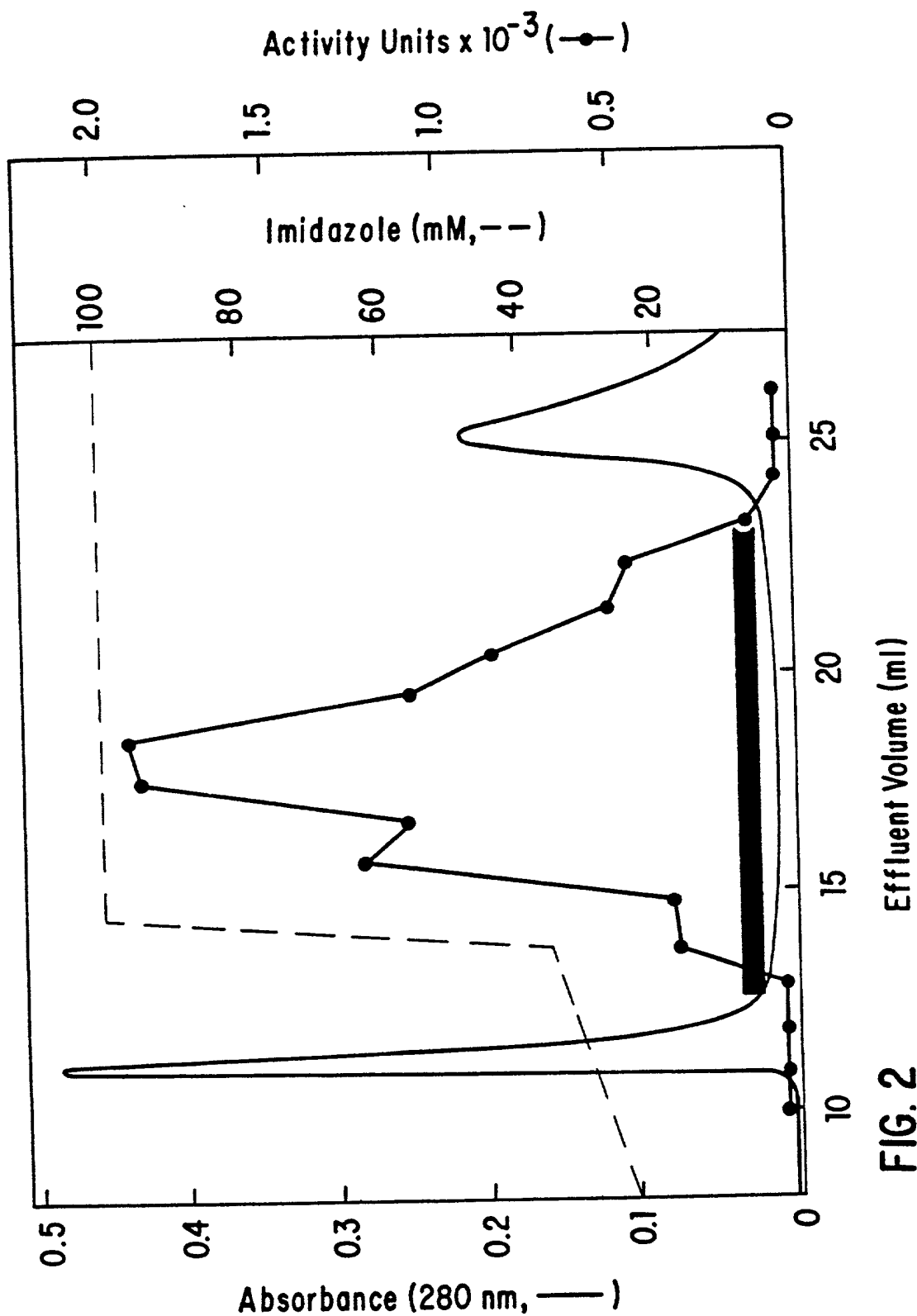


FIG. 2

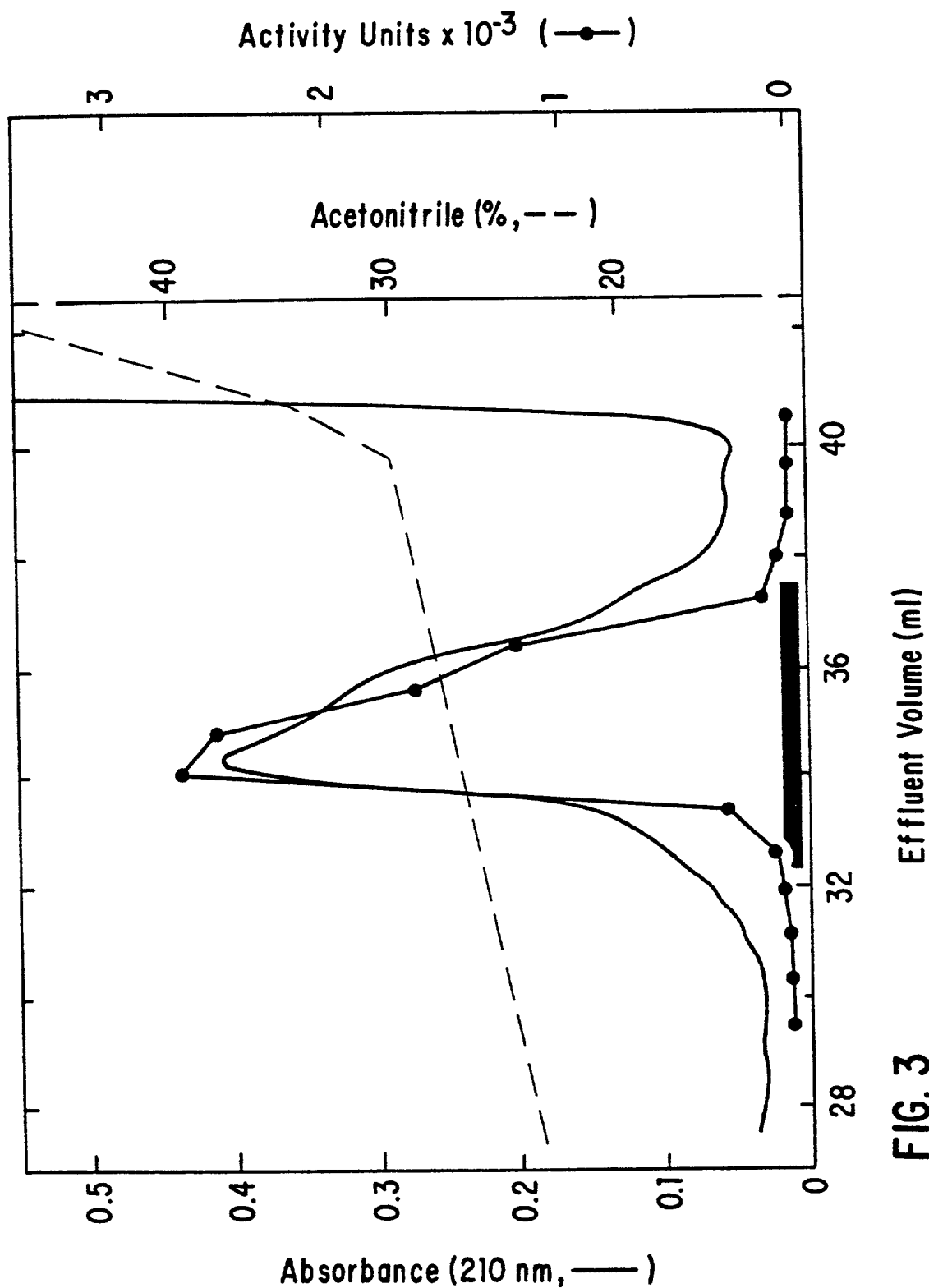


FIG. 3

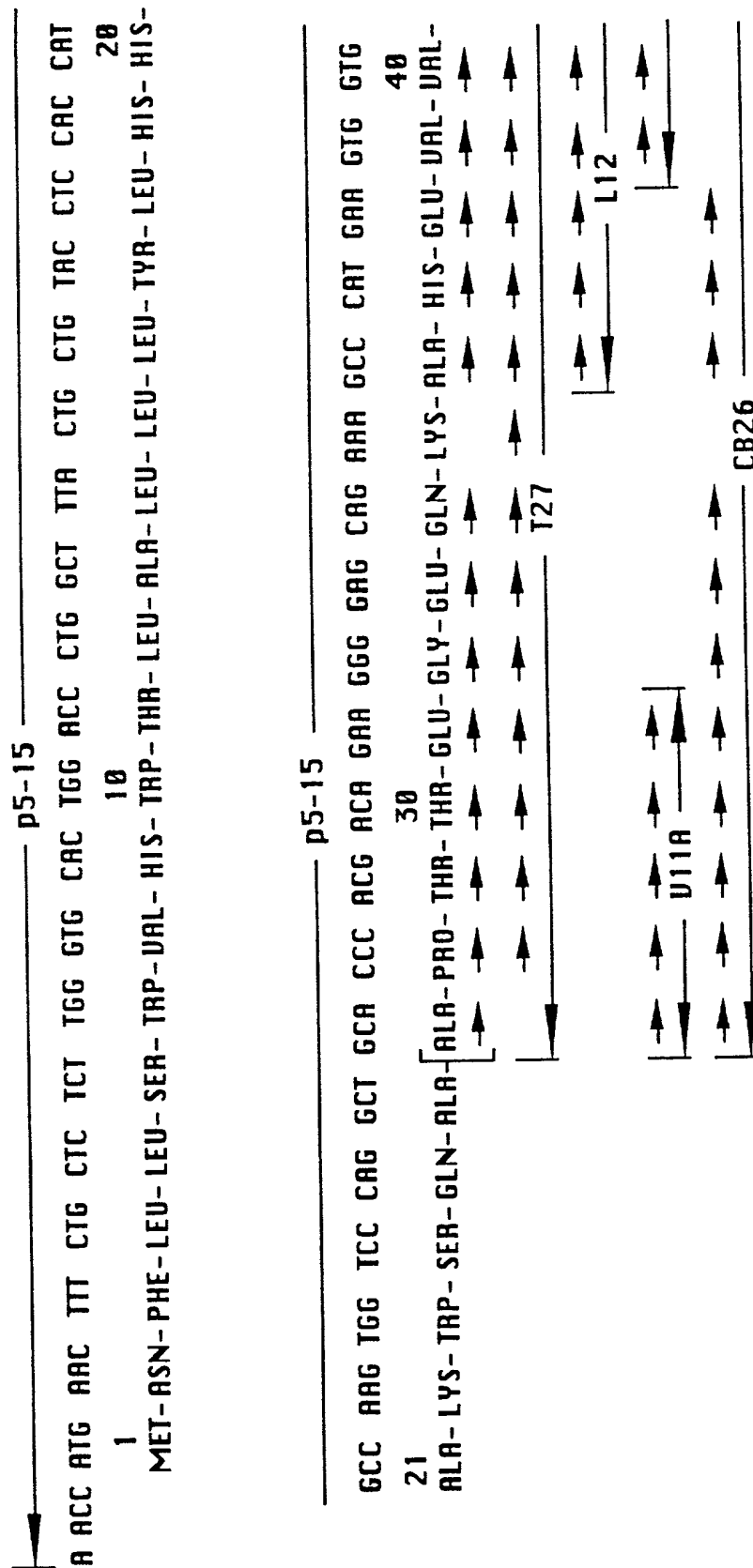


FIG. 4

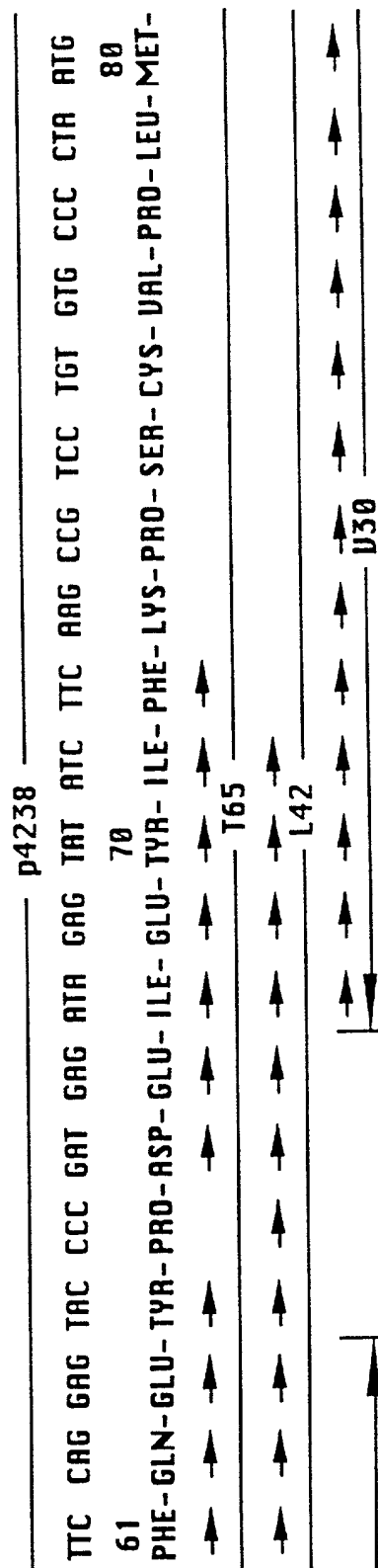
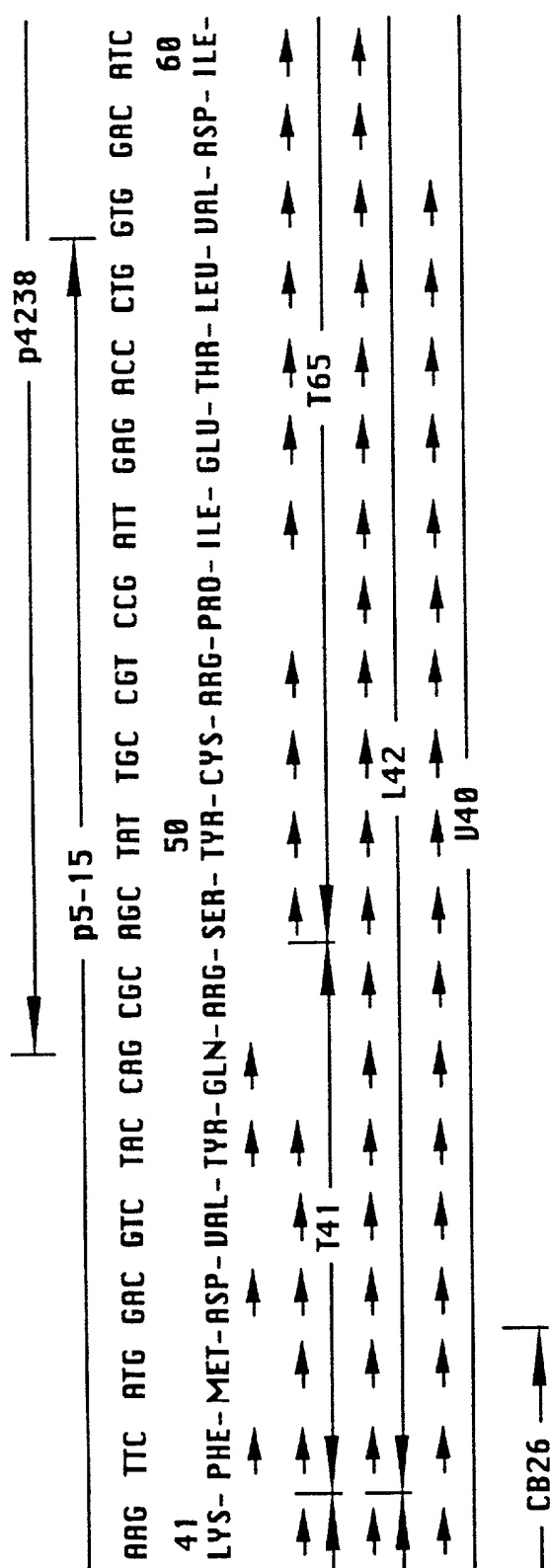


FIG. 4A

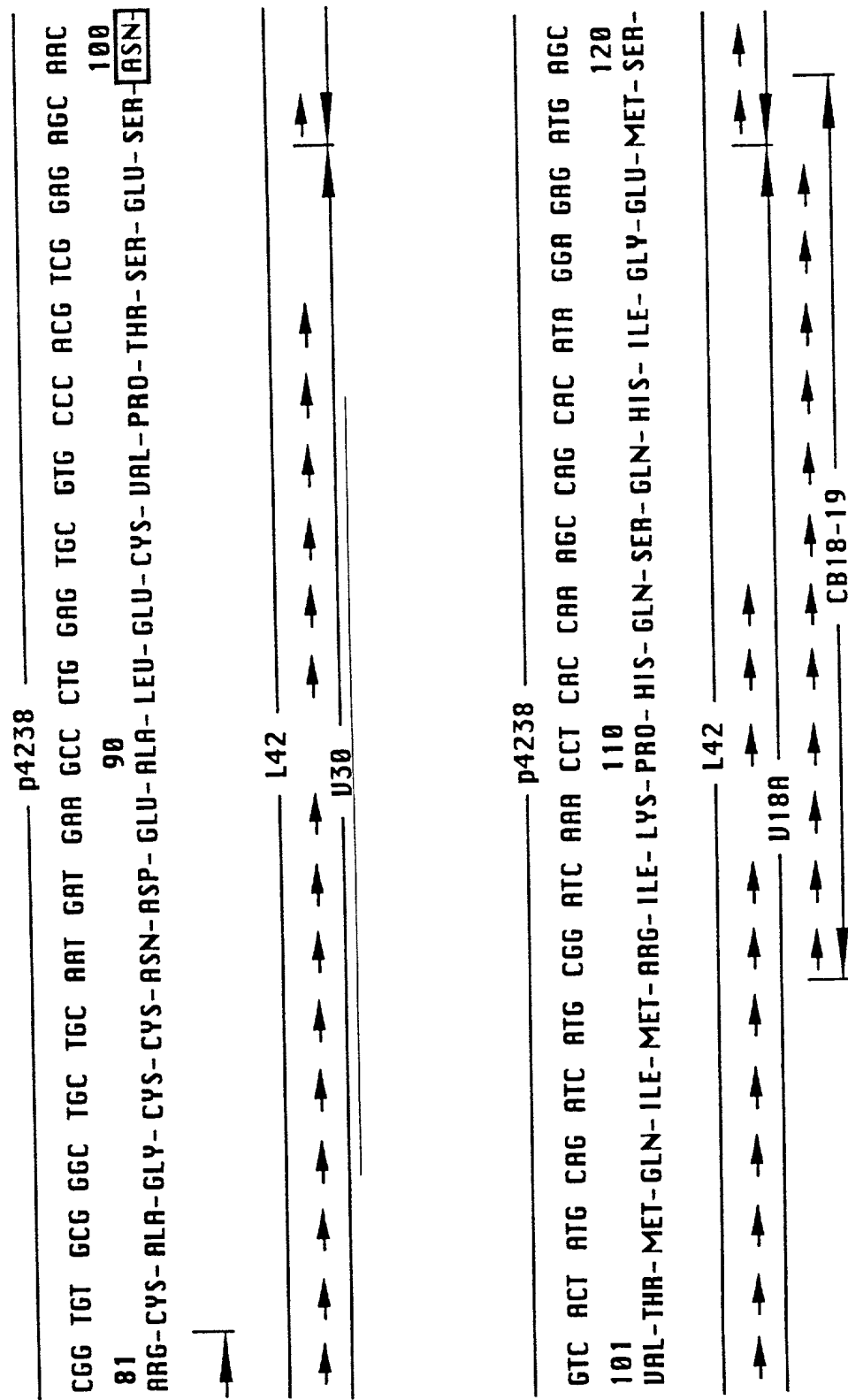


FIG. 4B

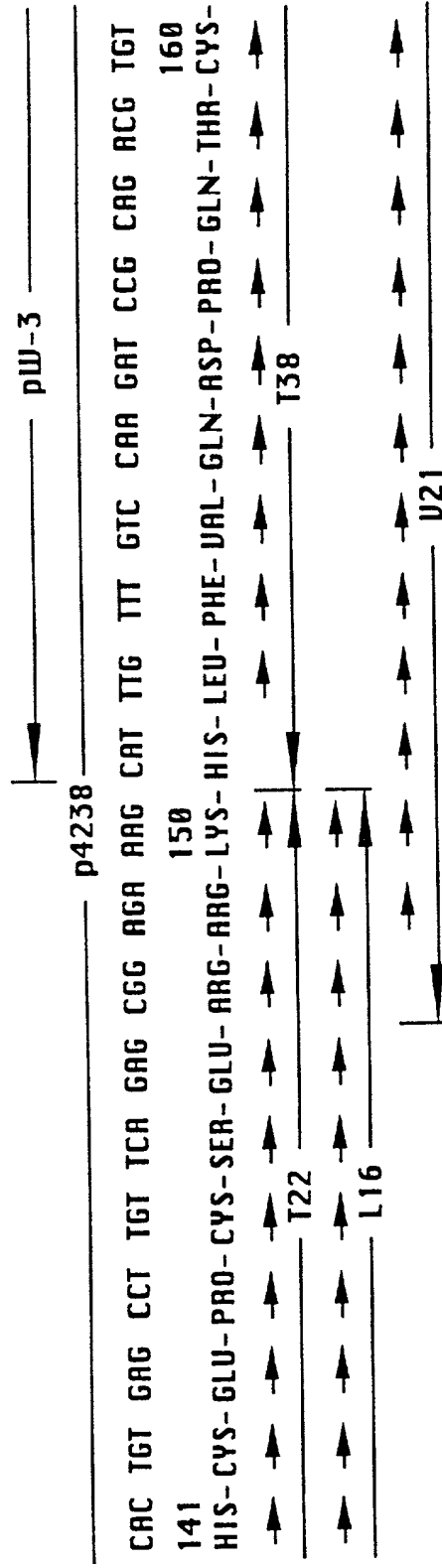
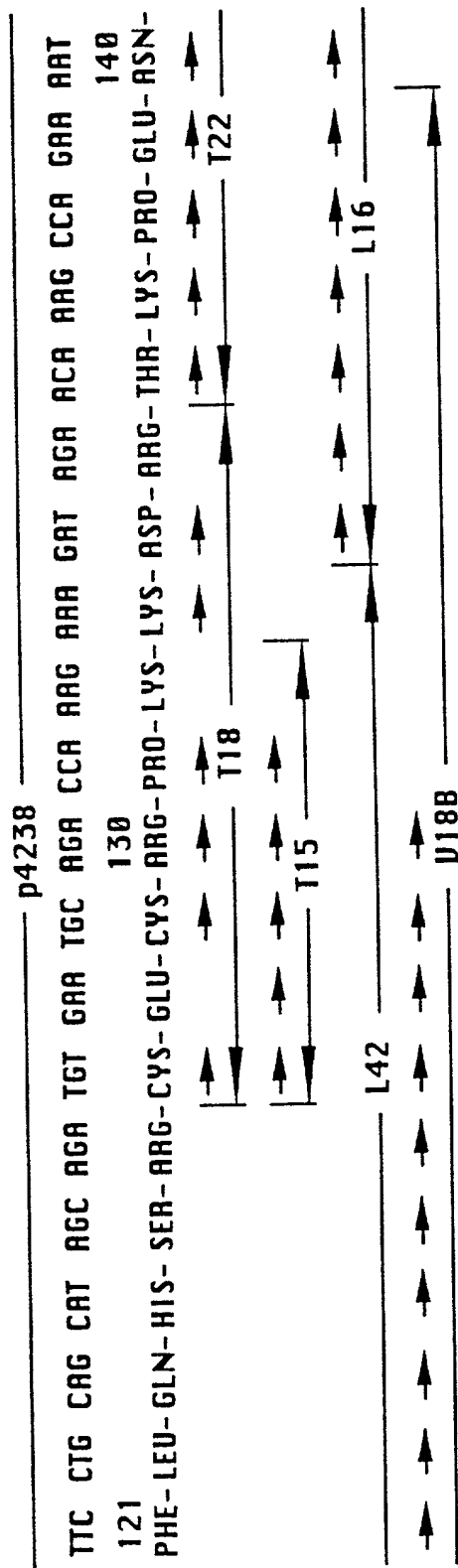


FIG. 4C

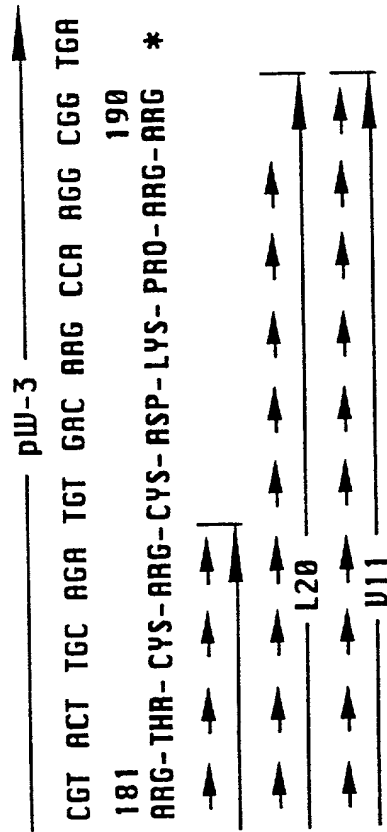
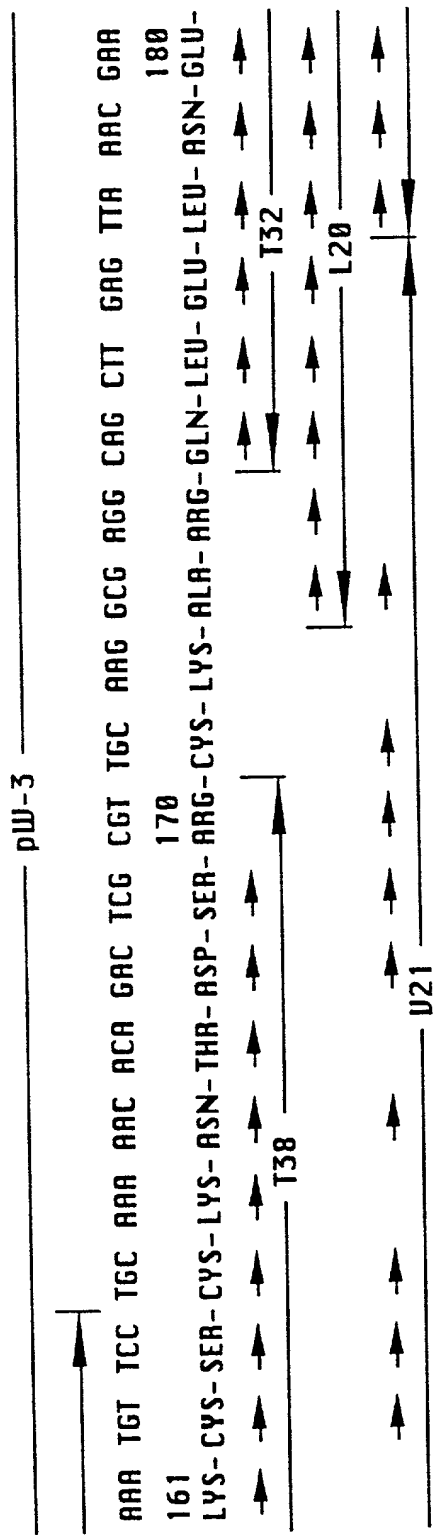


FIG. 4D

p5-15

GCC AAG TGG TCC CAG GCT GCA CCC ACG ACA GAA GGG GAG CAG AAA GCC CAT GAA GTG GTG	
21	48
ALA-LYS-TRP-SER-GLN-ALA-	
[ALA-PRO-THR-THR-GLU-GLY-GLU-GLN-LYS-ALA-HIS-GLU-VAL-VAL-	
→ → → → → → → → → → → → → → →	
→ → → → → → → → → → → → → → →	L16
	L13

FIG. 4E

p4238
TTC CAG GAG TAC CCC GAT GAG ATA GAG TAT ATC TTC AAG CCG TCC TGT GTG CCC CTA ATG
61 70 80
PHE-GLN-GLU-TYR-PRO-ASP-GLU-ILE-GLU-TYR-ILE-PHE-LYS-PRO-SER-CYS-VAL-PRO-LEU-MET-
→ → → → →
L46

p4238
CGG TGT GCG GGC TGC TGC AAT GAT GAA GCC CTG GAG TGC GTG CCC ACG TCG GAG AGC AAC
81 90 100
ARG-CYS-ALA-GLY-CYS-CYS-ASN-ASP-GLU-ALA-LEU-GLU-CYS-VAL-PRO-THR-SER-GLU-SER-ASN-
L46

p4238
GTC ACT ATG CAG ATC ATG CCG ATC AAA CCT CAC CAA AGC CAG CAC ATA GGA GAG ATG AGC
101 110 120
VAL-THR-MET-GLN-ILE-MET-ARG-ILE-LYS-PRO-HIS-GLN-SER-GLN-HIS-ILE-GLY-GLU-MET-SER-
L46

FIG. 4F

p4238
TTC CTG CAG CAT AGC AGA TGT GAA TGC AGA CCA AAG AAA GAT AGA ACA AAG CCA GAA AAT 140
121 PHE-LEU-GLN-HIS-SER-ARG-CYS-GLU-CYS-ARG-PRO-LYS-LYS-ASP-ARG-THR-LYS-PRO-GLU-ASN-
L20

p4238
CAC TGT GAG CCT TGT TCA GAG CGG AGA AAG CAT TTG TTT GTC CAA GAT CCG CAG ACG TGT 160
141 HIS-CYS-GLU-PRO-CYS-SER-GLU-ARG-ARG-LYS-HIS-LEU-PHE-VAL-GLN-ASP-PRO-GLN-THR-CYS-
L30

p4238
AAA TGT TCC TGC AAA AAC ACA GAC TCG CGT TGC AAG GCG AGG CAG CTT GAG TTA AAC GAA 180
161 LYS-CYS-SER-CYS-LYS-ASN-THR-ASP-SER-ARG-CYS-LYS-ALA-ARG-GLN-LEU-GLU-LEU-ASN-GLU-
L30 L26

FIG. 4G

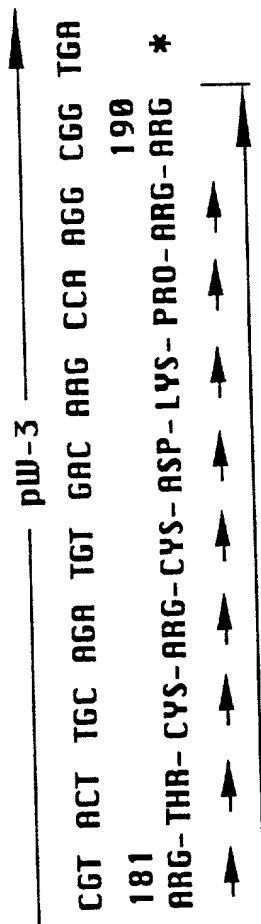


FIG. 4H

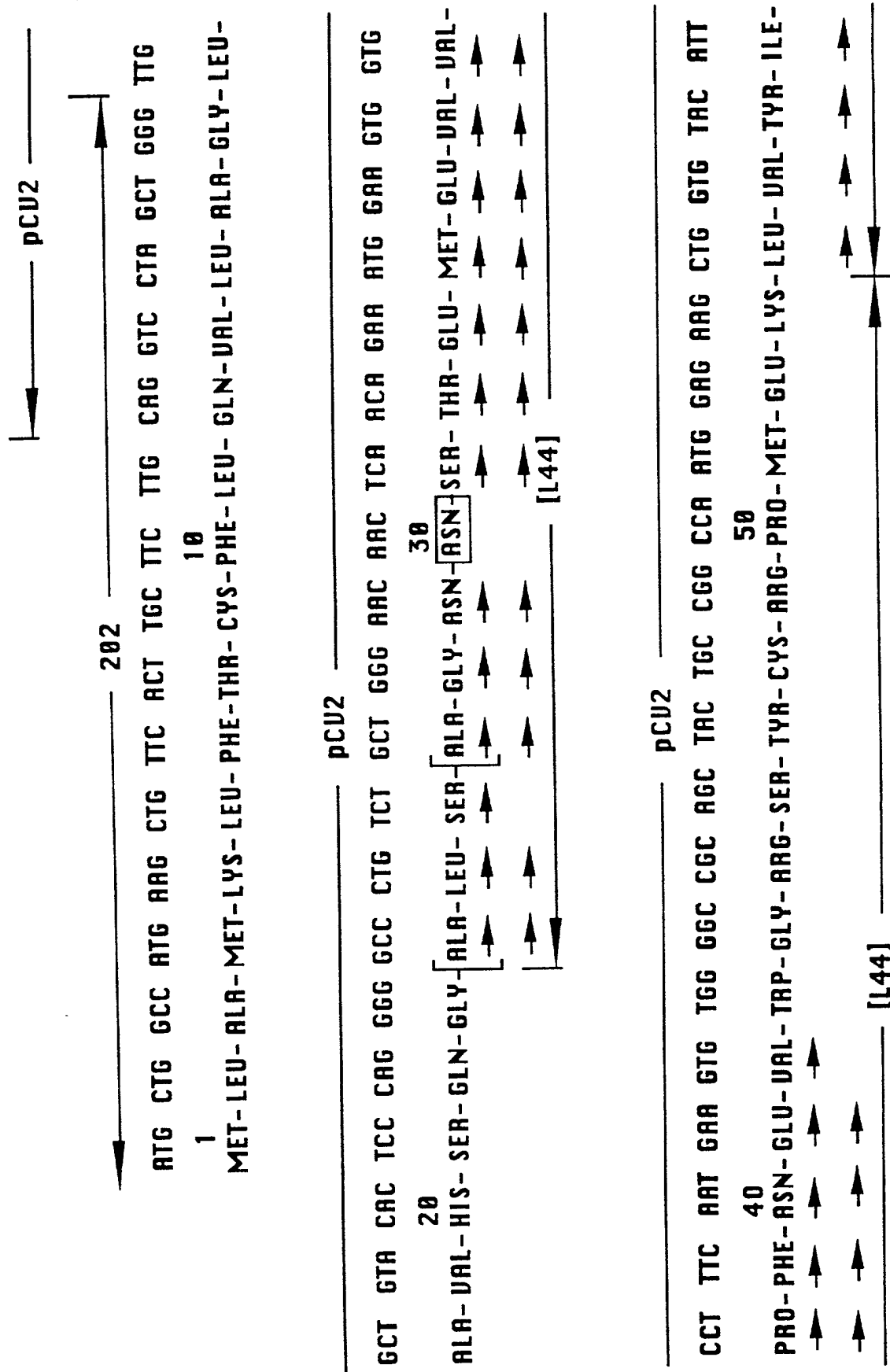


FIG. 4I

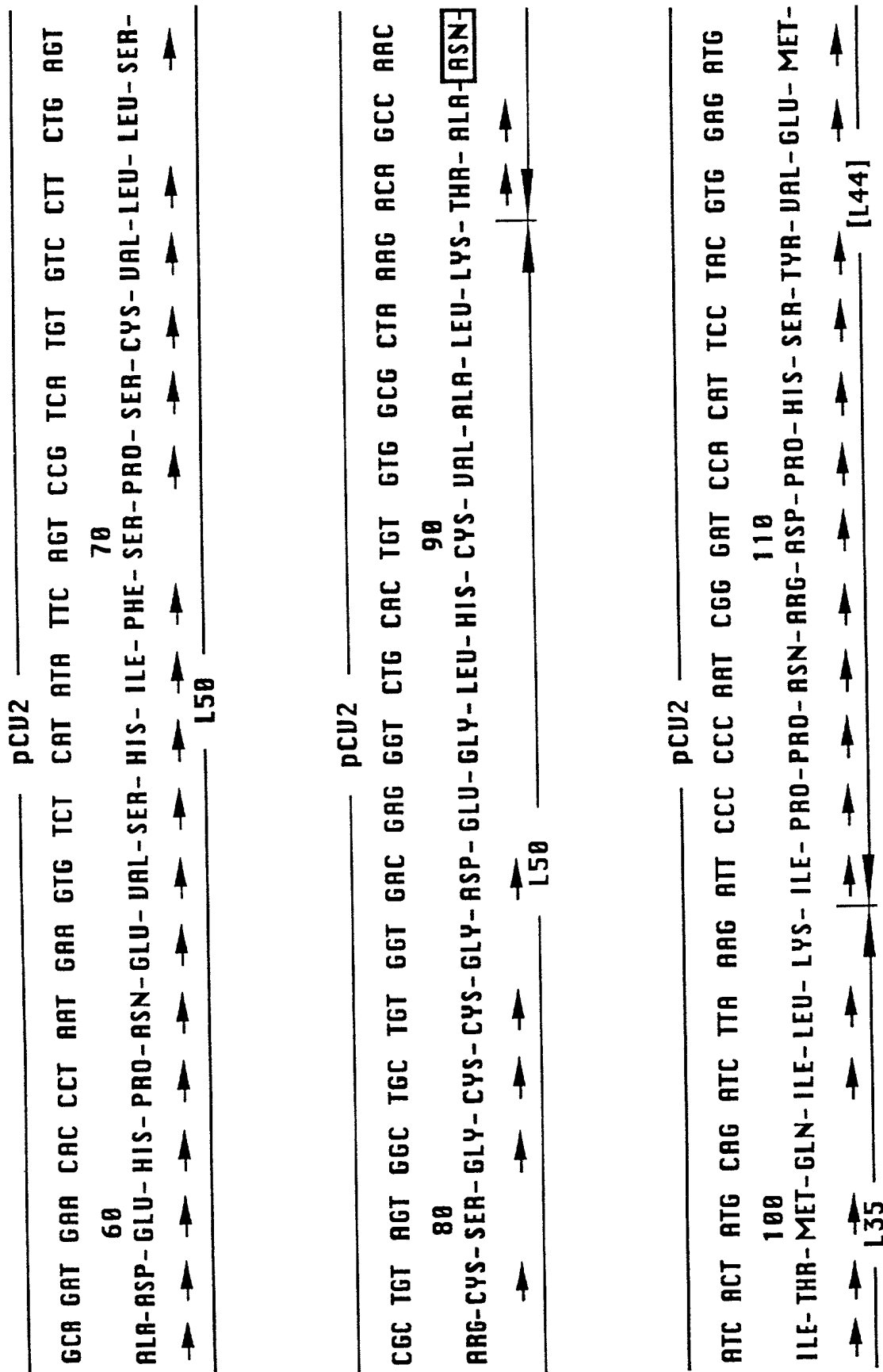
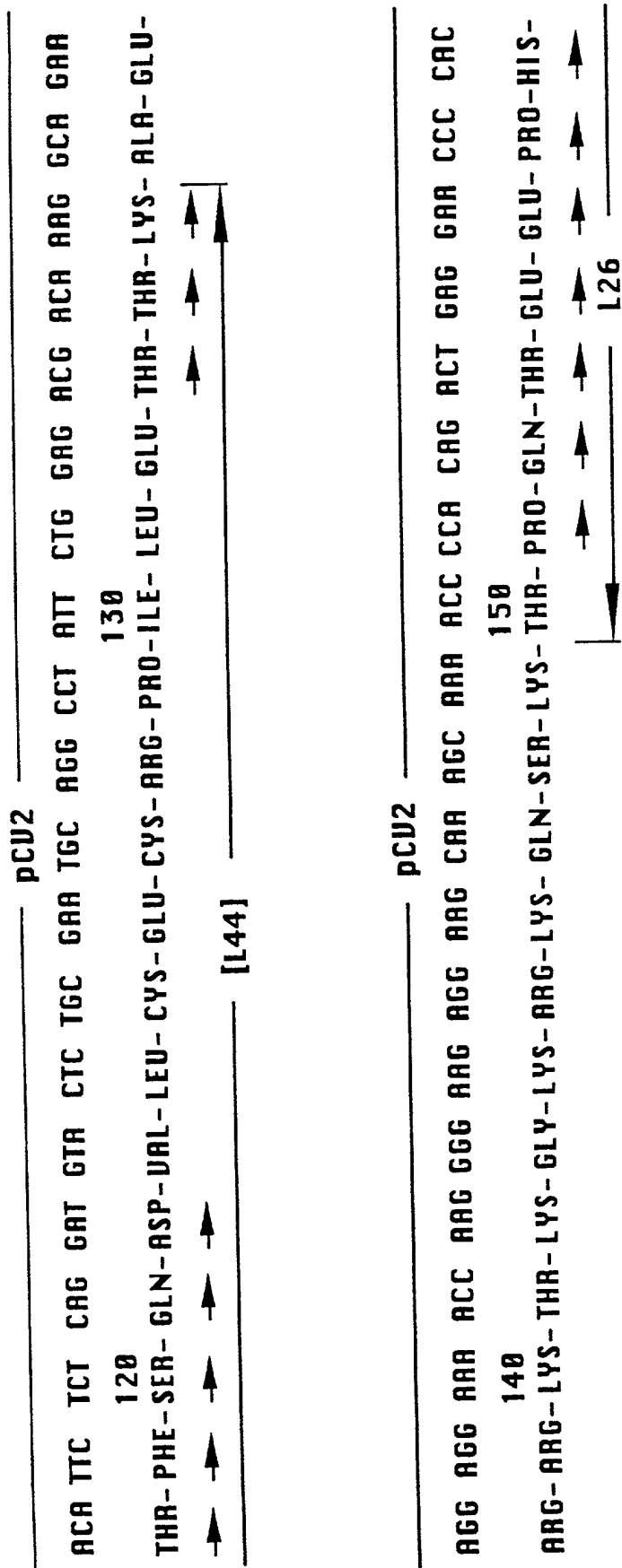


FIG. 4J



CTG TGA
 158
 LEU *

FIG. 4K

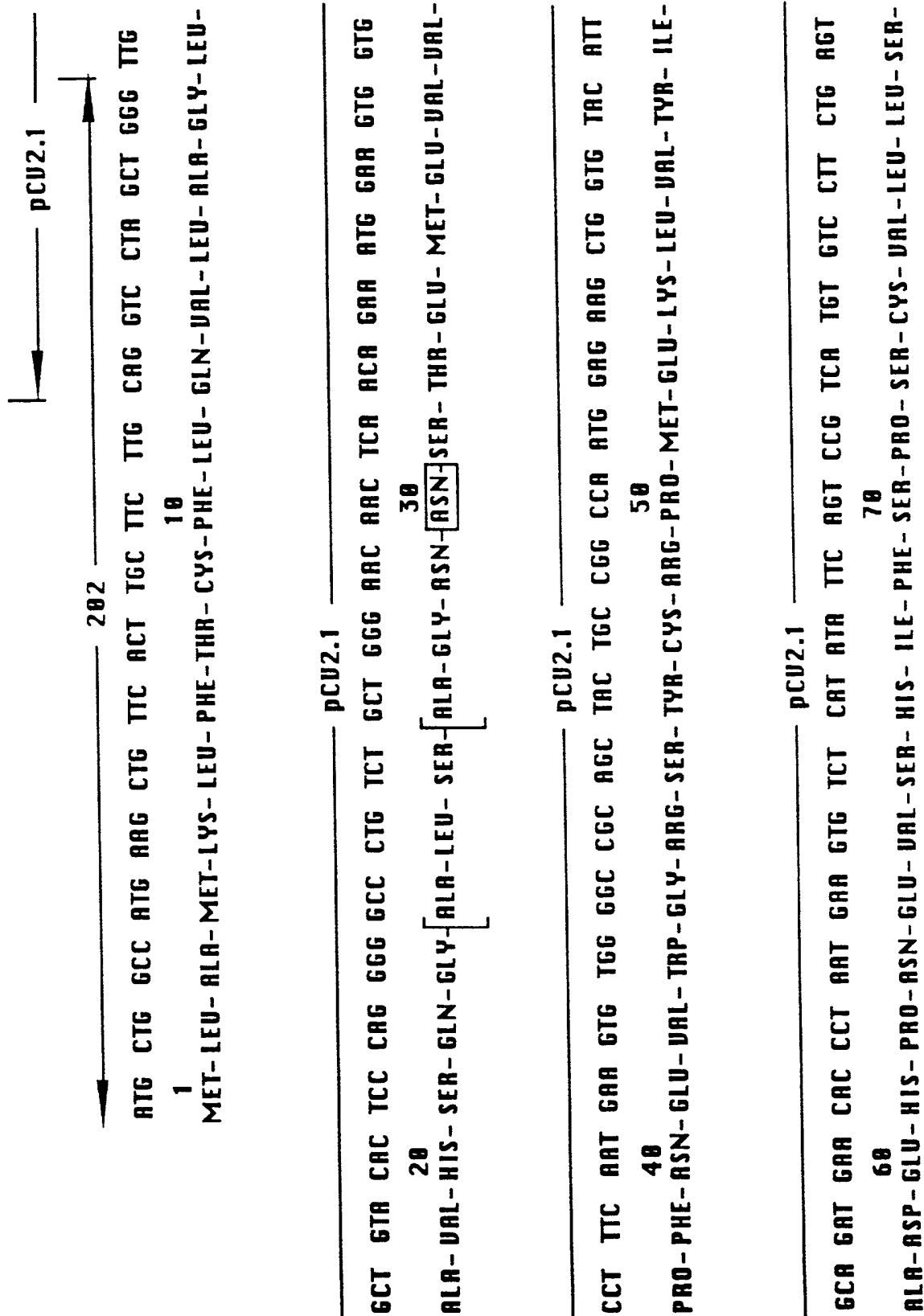


FIG. 4L

pcv2.1
CGC TGT AGT GGC TGC TGT GGT GAC GAG GGT CTG CAC TGT GTG GCG CTA AAG ACA GCC AAC
80
ARG-CYS-SER-GLY-CYS-CYS-GLY-ASP-GLU-GLY-LEU-HIS-CYS-VAL-ALA-LEU-LYS-THR-ALA-ASN

pcv2.1
ATC ACT ATG CAG ATC TTA AAG ATT CCC CCC AAT CGG GAT CCA CAT TCC TAC GTG GAG ATG
100
ILE-THR-MET-GLN-ILE-LEU-LYS-ILE-PRO-PRO-ASN-ARG-ASP-PRO-HIS-SER-TYR-VAL-GLU-MET

pcv2.1
ACA TTC TCT CAG GAT GTA CTC TGC GAA TGC AGG CCT ATT CTG GAG ACG ACA AAG GCA GAA
120
THR-PHE-SER-GLN-ASP-VAL-LEU-CYS-GLU-CYS-ARG-PRO-ILE-LEU-GLU-THR-THR-LYS-ALA-GLU



AGG TAA

138

ARG *

FIG. 4M

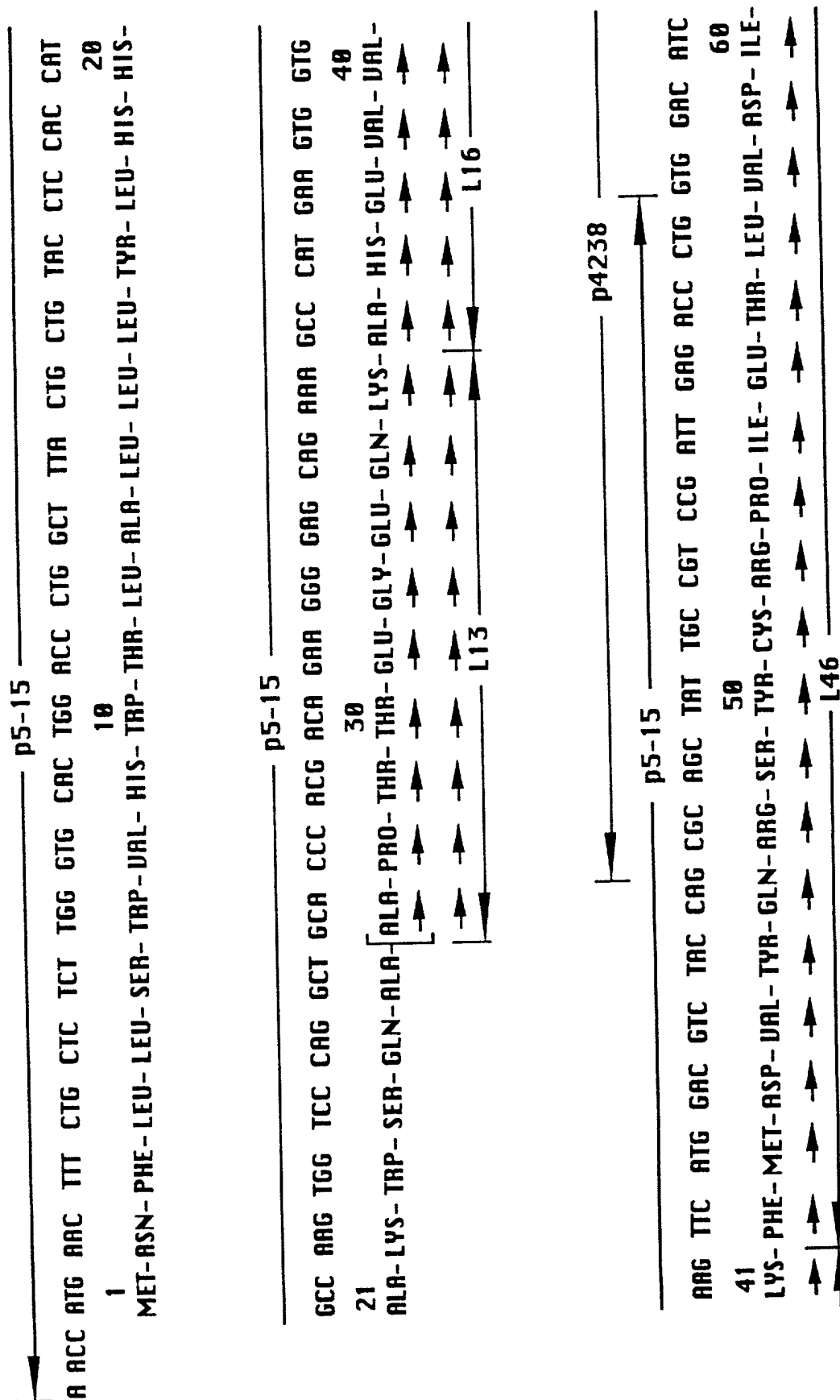


FIG. 5

	p4238	
TTC CAG GAG TAC CCC GAT GAG ATA GAG TAT ATC TTC AAG CCG TCC TGT GTG CCC CTA ATG		
61	78	88
PHE-GLN-GLU-TYR-PRO-ASP-GLU-ILE-GLU-TYR-ILE-PHE-LYS-PRO-SER-CYS-VAL-PRO-LEU-MET-		
→ → → → → → →		
	146	

p4238

CGG TGT GCG GGC TGC TGC AAT GAT GAA GCC CTG GAG TGC GTG CCC ACC TCG GAG AGC AAC
81 90 100

ARG-CYS-ALA-GLY-CYS-CYS-ASP-GLU-ALA-LEU-GLU-CYS-VAL-PRO-THR-SER-GLU-SER-ASN-

146

GTC ACT ATG CAG ATC ATG CGG ATC AAA CCT CAC CAA AGC CAG CAC ATA GGA GAG ATG AGC
 101 110
 VAL-THR-MET-GLN-ILE-MET-ARG-ILE-LYS-PRO-HIS-GLN-SER-GLN-HIS-ILE-GLY-GLU-MET-SER-
 120
 146

FIG. 5A

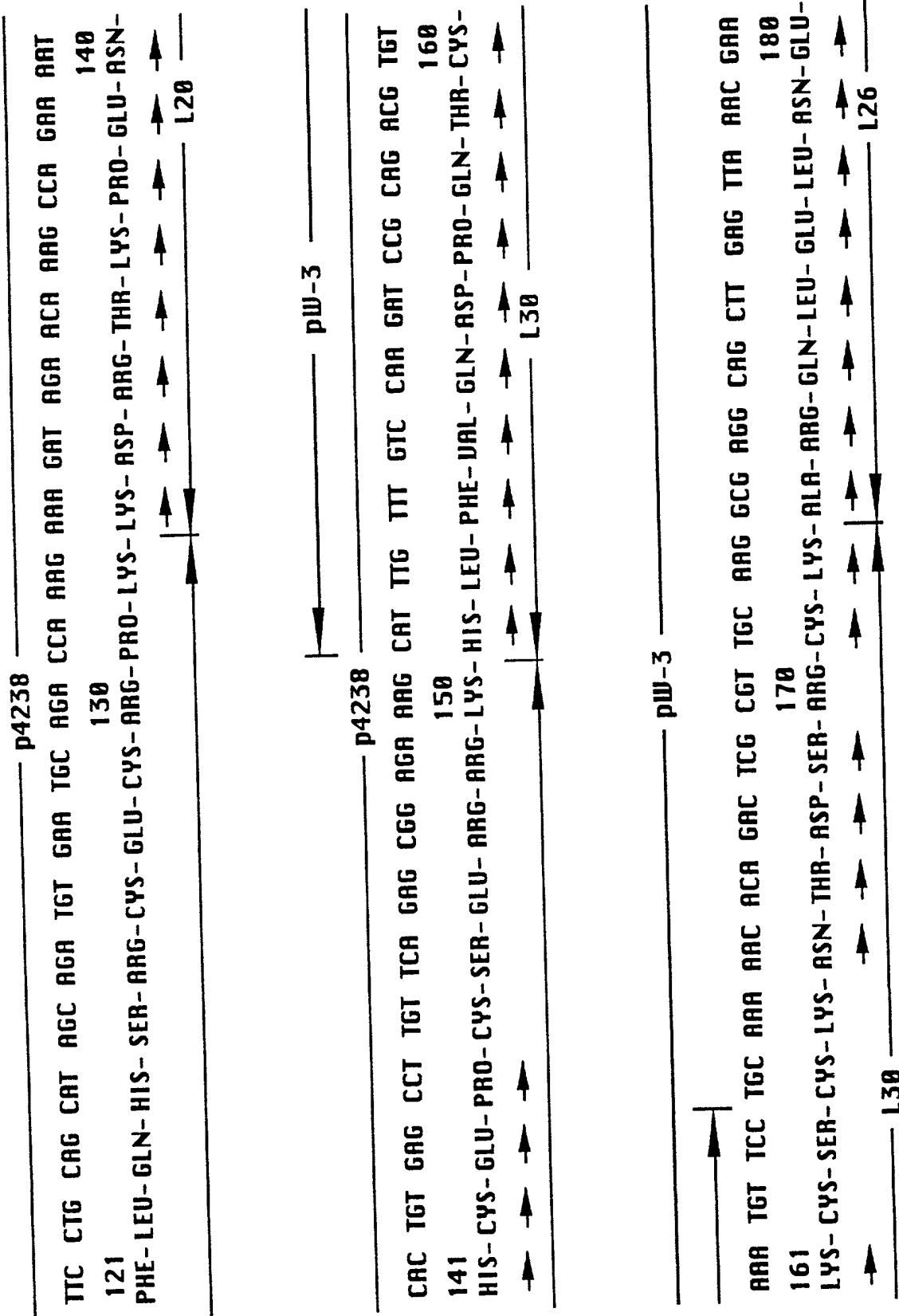


FIG. 5B

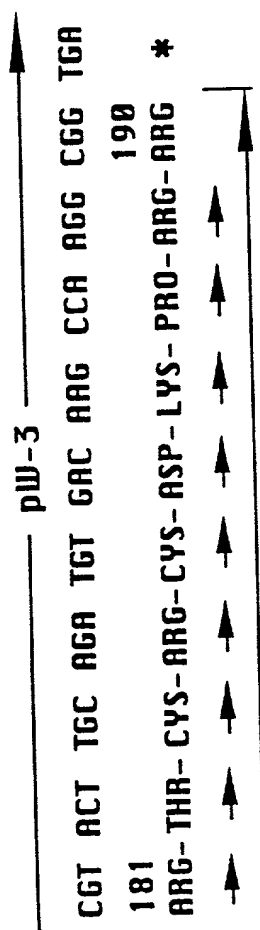
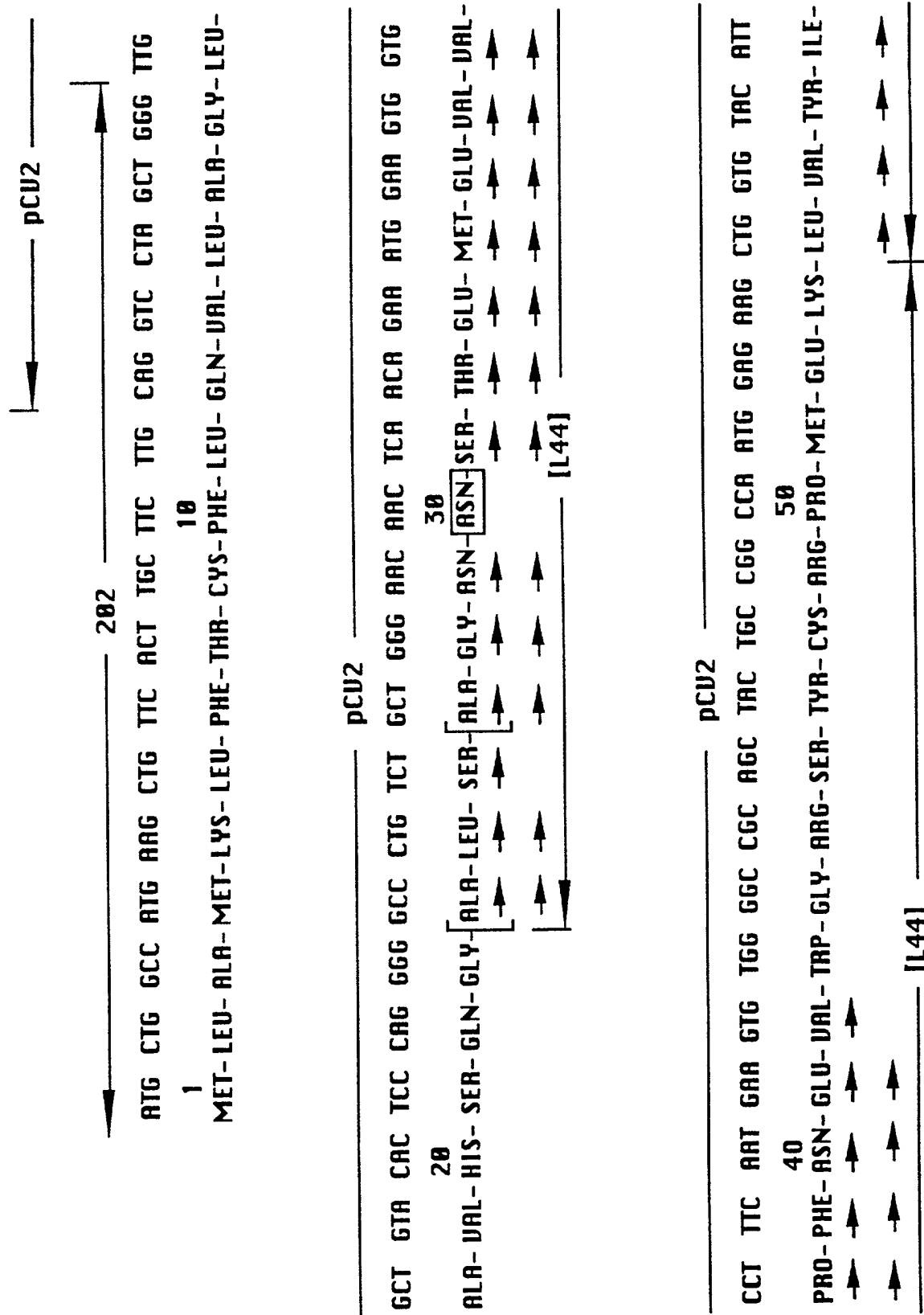


FIG. 5C



pCU2
 GCA GAT GAA CAC CCT AAT GAA GTG TCT CAT ATA TTC AGT CCG TCA TGT GTC CTT CTG AGT
 60
 ALA-ASP-GLU-HIS-PRO-ASN-GLU-VAL-SER-HIS-ILE-PHE-SER-PRO-SER-CYS-VAL-LEU-LEU-SER-
 70
 150

pCU2
 CGC TGT AGT GGC TGC TGT GGT GAC GAG GGT CTG CAC TGT GTG GCG CTA AAG ACA GCC AAC
 80
 ARG-CYS-SER-GLY-CYS-GLY-ASP-GLU-GLY-LEU-HIS-CYS-VAL-ALA-LEU-LYS-THR-ALA-ASN-
 90
 150

pCU2
 ATC ACT ATG CAG ATC TTA AAG ATT CCC CCC AAT CGG GAT CCA CAT TCC TAC GTG GAG ATG
 100
 ILE-THR-MET-GLN-ILE-LEU-LYS-ILE-PRO-PRO-ASN-ARG-ASP-PRO-HIS-SER-TYR-VAL-GLU-MET-
 110
 135 [144]

FIG. 6A

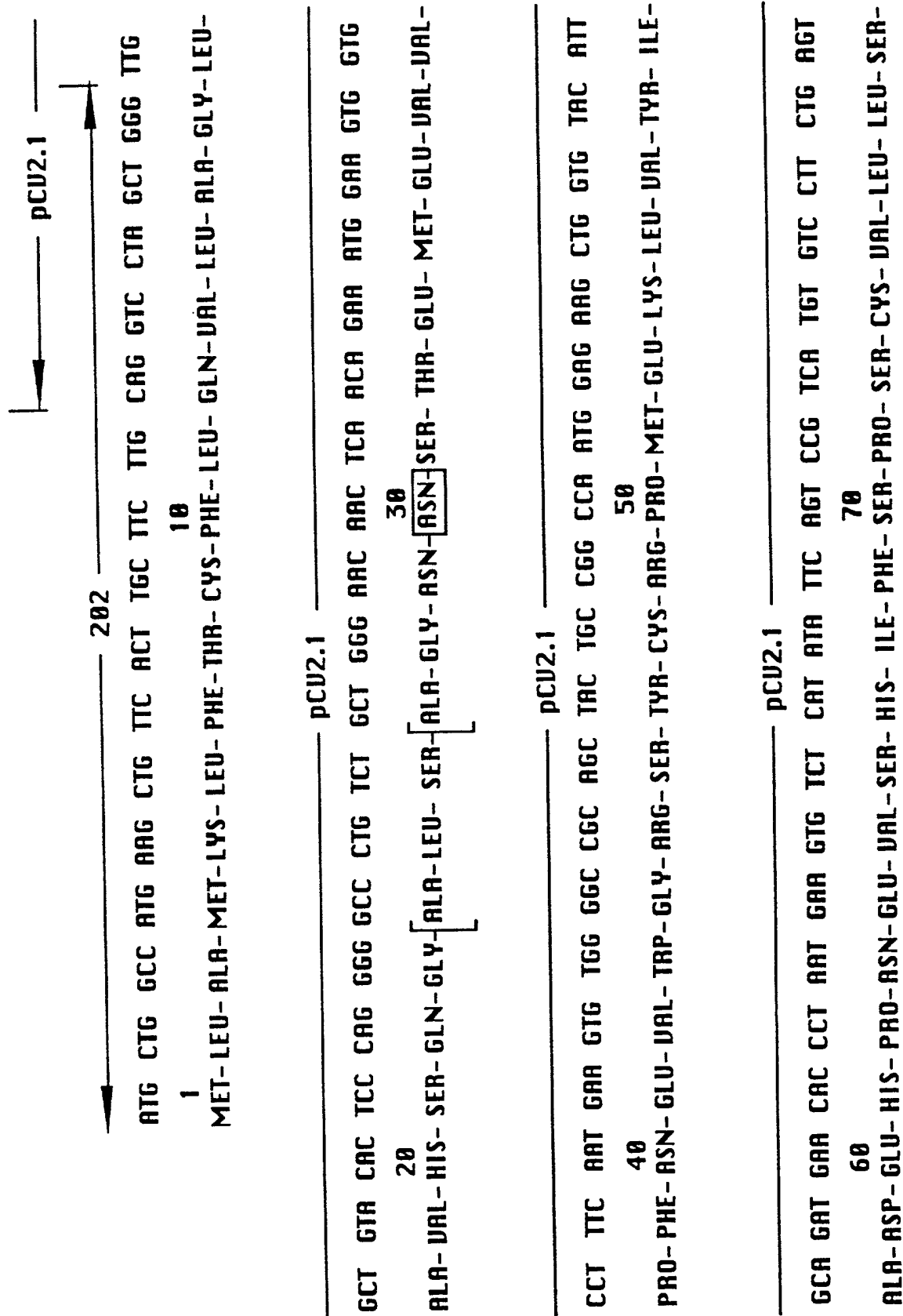


FIG. 7

PCV2.1
 CGC TGT AGT GGC TGC TGT GGT GAC GAG GGT CTG CAC TGT GTG GCG CTA AAG ACA GCC AAC
 80
 ARG-CYS-SER-GLY-CYS-GLY-ASP-GLU-GLY-LEU-HIS-CYS-VAL-ALA-LEU-LYS-THR-ALA-ASN-

PCV2.1
 ATC ACT ATG CAG ATC TTA ARG ATT CCC CCC AAT CGG GAT CCA CAT TCC TAC GTG GAG ATG
 100
 ILE-THR-MET-GLN-ILE-LEU-LYS-ILE-PRO-PRO-ASN-ARG-ASP-PRO-HIS-SER-TYR-VAL-GLU-MET-

PCV2.1
 ACA TTC TCT CAG GAT GTA CTC TGC GAA TGC AGG CCT ATT CTG GAG ACG ACA AAG GCA GAA
 120
 THR-PHE-SER-GLN-ASP-VAL-LEU-CYS-GLU-CYS-ARG-PRO-ILE-LEU-GLU-THR-THR-LYS-ALA-GLU-



AGG TAA

138

ARG *

FIG. 7A

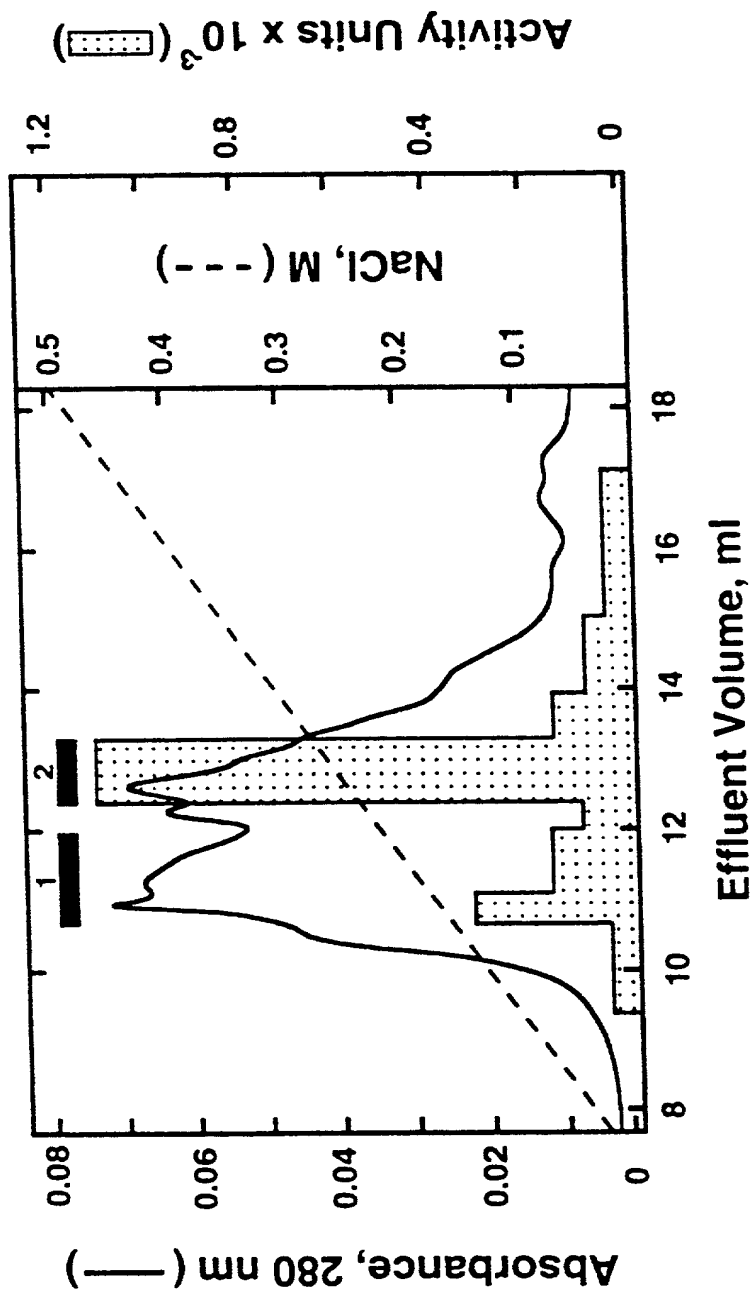


FIG. 8A

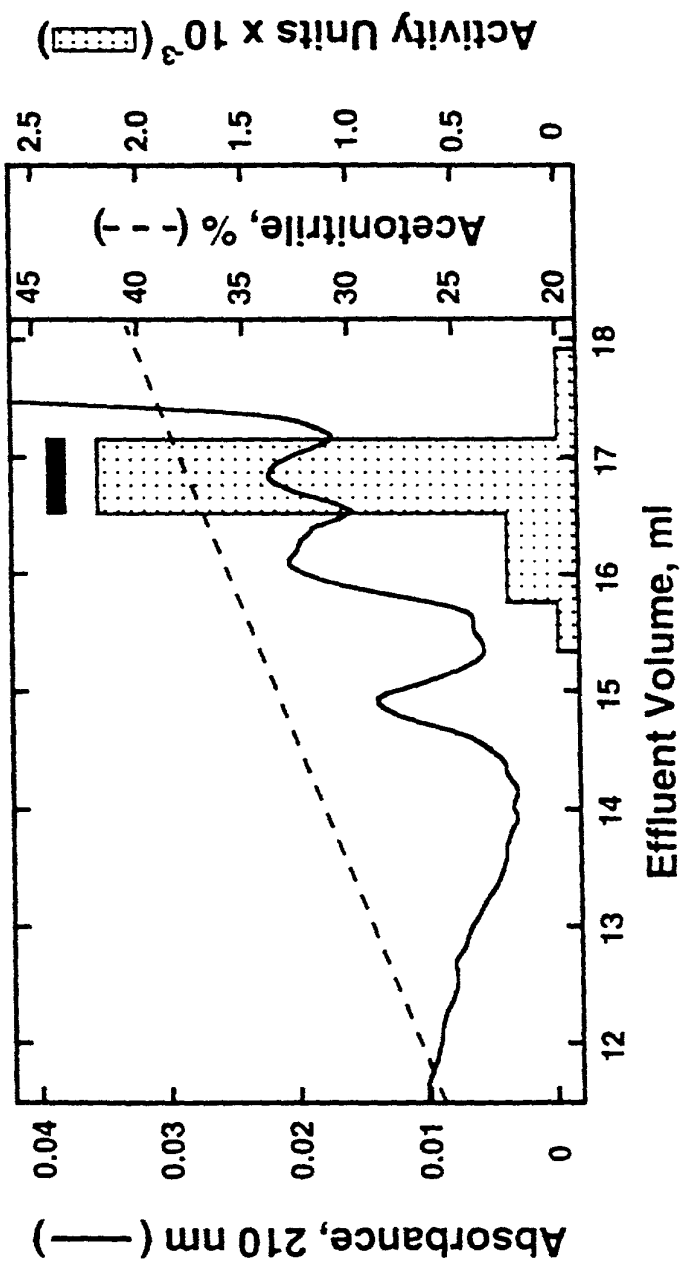


FIG. 8B

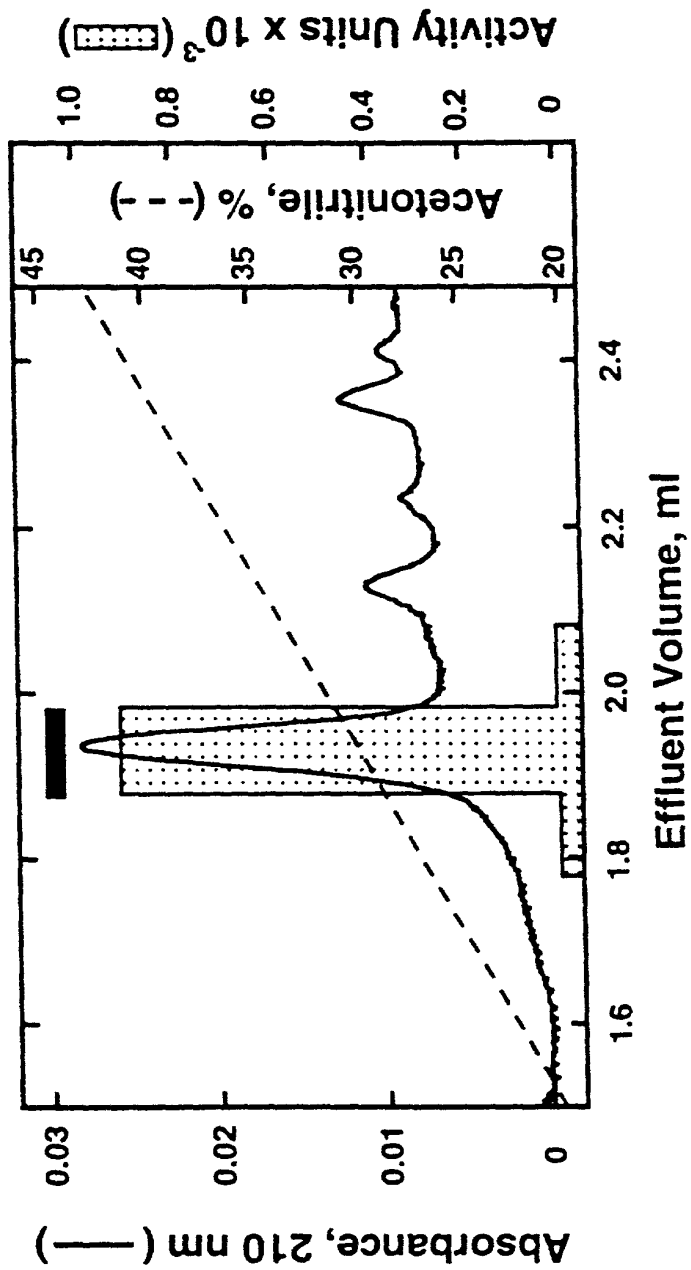


FIG. 8C

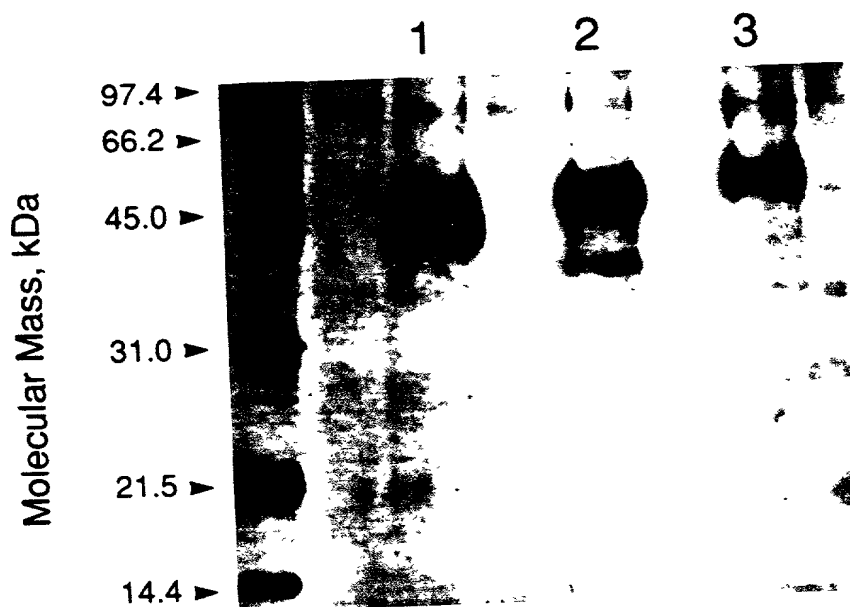


FIG.9A



FIG.9B

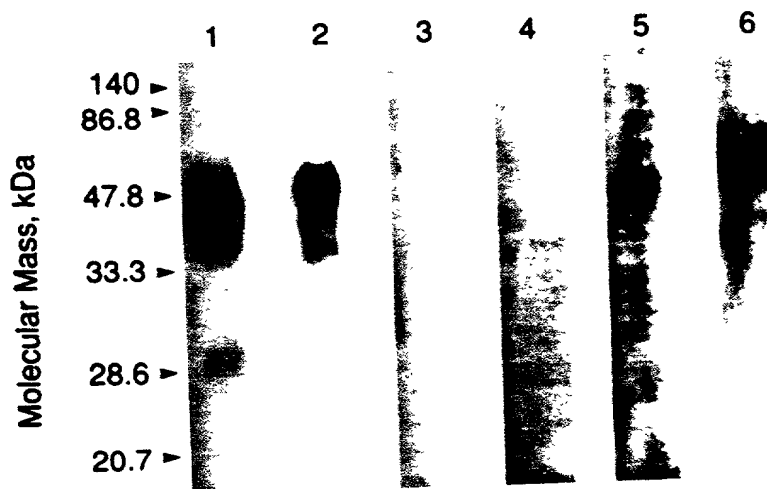


FIG. 10A

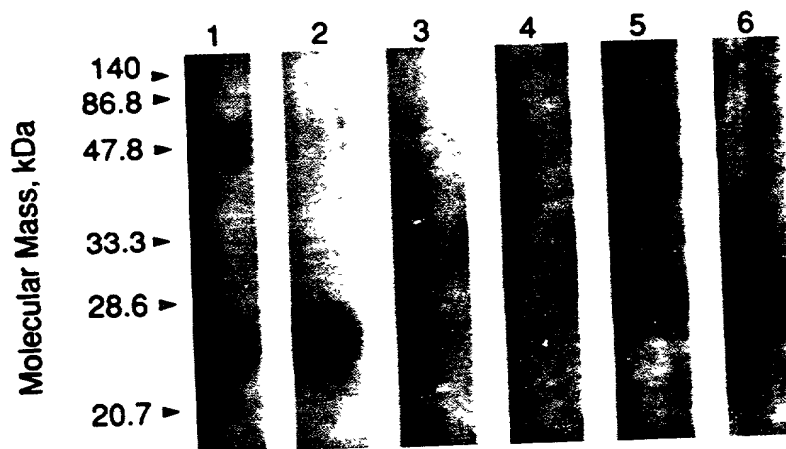


FIG. 10B

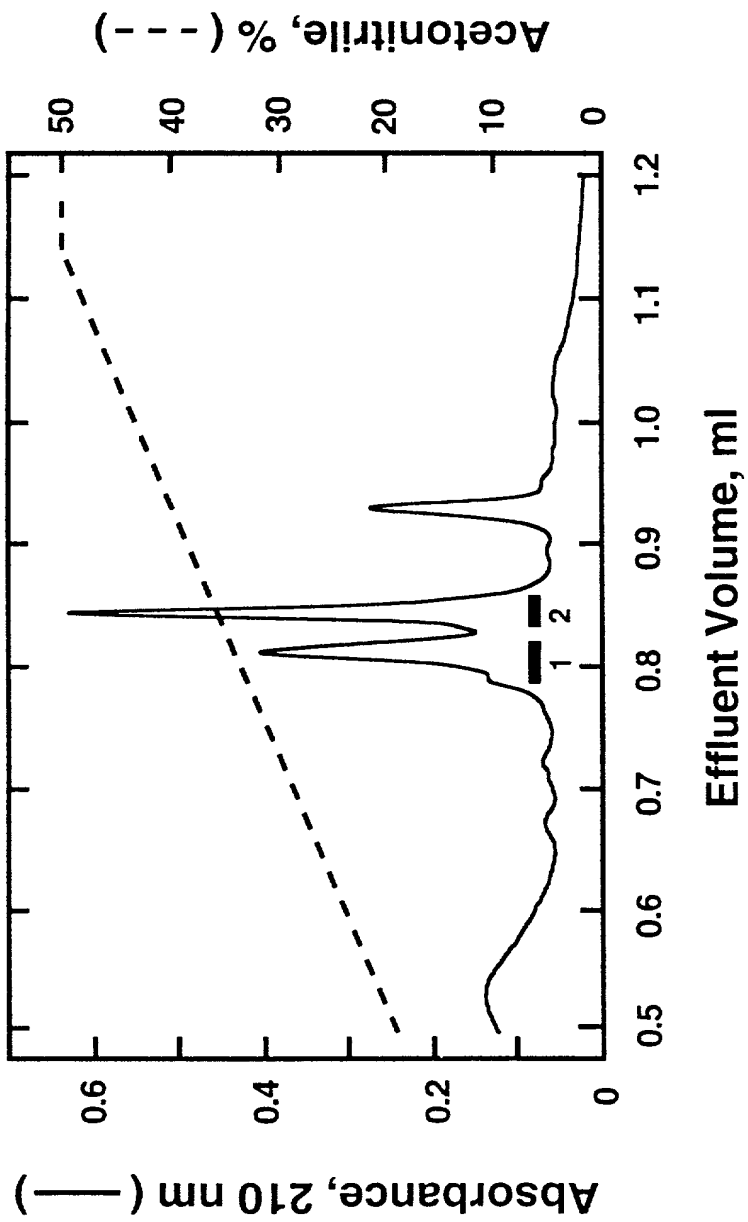


FIG. 11